

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-5. (canceled)

6. (new) A method for air conditioning a passenger compartment of a vehicle, said method comprising:

providing heat from a passenger compartment heat exchanger to the passenger compartment through heat pump operation of a refrigerating circuit (1) comprising a compressor (2) for pressurizing an automobile refrigerant, a condenser (3), a throttle valve (4) and an evaporator (5) used as a passenger compartment heat exchanger;

measuring the temperature in the passenger compartment with a temperature sensor;

measuring the atmospheric humidity in the passenger compartment with a humidity sensor; and

when the temperature is in a predefined range and the atmospheric humidity reaches a defined threshold:

- controlling throttle valve (4) by signals from the temperature and humidity sensors to throttle the mass flow of refrigerant in the circuit upstream of the passenger compartment heat exchanger (5), in such a manner that the moisture contained in the air stream passing the passenger compartment heat exchanger (5) is at least substantially condensed at the passenger compartment heat exchanger (5), and the moisture which has already condensed at the heat exchanger (5) remains at the heat exchanger (5), and

- heating the passenger compartment by a heat source which is outside the circuit (1) until the temperature in the passenger compartment exceeds an upper limit temperature of the predefined range.

7. (new) The method as claimed in claim 6, wherein said temperature range and atmospheric humidity threshold are determined based on the dewpoint temperature which leads to fogging of the windows.
8. (new) The method as claimed in claim 6, wherein said a heat source which is outside the circuit (1) includes a heating heat exchanger (24) which has heated engine coolant from an engine cooling circuit (12) flowing through it, and also has an air stream that is routed into the passenger compartment passing through it.
9. (new) The method as claimed in claim 8, comprising heating, prior to throttling the mass flow of refrigerant in the refrigerating circuit (1), both the refrigerant and the engine coolant by means of the compressor (2), which acts in the heat pump, of the refrigerating circuit (1), with heat being removed from the refrigerating circuit (1) via a countercurrent heat exchanger (23) and transferred to the engine coolant.
10. (new) The method as claimed in claim 9, wherein the heat is transferred only to the engine coolant of a first section (14) of the engine cooling circuit (12), which first section (14) includes a heating pump (22) and the heating heat exchanger (24), and wherein a second circuit section (13) of the engine cooling circuit (12), which includes the engine (16) and the radiator (17), are fluidically decoupled from the first circuit section (14).
11. (new) The method as claimed in claim 6, wherein during heating, the air-conditioning system is switched to recirculated air, the refrigerant releasing its heat in the counter-current heat exchanger (23) and being throttled in the throttle valve (4) to a pressure which correlates with a temperature such that the temperature at the surface of the passenger compartment heat exchanger (5) is below the dewpoint temperature which leads to fogging of the windows.